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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/812,664	03/30/2004	Yong Qiang Wang	3993968-150413-1	3560

7590 01/25/2008  
Porter, Wright, Morris & Arthur LLP  
41 South High Street  
Columbus, OH 43215

EXAMINER
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PILKINGTON, JAMES

ART UNIT	PAPER NUMBER
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3682

MAIL DATE	DELIVERY MODE
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01/25/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/812,664	<b>Applicant(s)</b> WANG, YONG QIANG	
	<b>Examiner</b> JAMES PILKINGTON	<b>Art Unit</b> 3682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 18-20 is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reasoner et al, USP 6,230,579, in view of Osborn, USP 5,277,077.

Re clm 1, Reasoner discloses a shifter mechanism comprising, in combination:

- A shifter lever (42) movable along a shift path
- a detent profile (on plate 70) defining a plurality of gear positions (Figure 2)
- A pawl (74) movable between a locking position wherein the pawl engages the detent profile to lock the shifter lever in one of the plurality of gear positions against movement and an unlocking position wherein the shifter lever is movable along the shift path between the plurality of gear positions
- An actuator (72) operatively coupled to the pawl (74) to selectively move the pawl (74) from the locking to the unlocking position

Reasoner does not disclose that the pawl includes a roller that engages the detent profile, a secondary detent profile defining a plurality of gear positions, an engagement head contacting the secondary detent profile, and a spring member

resiliently maintaining the engagement head in contact with the secondary detent profile as the shifter moves.

Osborn teaches a pawl (42) that includes a roller (43) that engages the detent profile for the purpose of providing a shift lever handle assembly having a limited number of parts and constructed of parts that can be actuated more smoothly and with less effort (C2/L30-35). Osborn further discloses a secondary detent profile (41) defining a plurality of gear positions, an engagement head (43) contacting the secondary detent profile (41), and a spring member (42) resiliently maintaining the engagement head in contact with the profile (41) for the purpose of providing an additional detent member (in addition to 30) which provides a position feel for the user.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the teachings of Reasoner and provide a pawl that includes a roller that engages the detent profile, a secondary detent profile defining a plurality of gear positions, an engagement head contacting the secondary detent profile, and a spring member resiliently maintaining the engagement head in contact with the secondary detent profile as the shifter moves, as taught by Osborn, for the purpose of providing a shift lever handle assembly having a limited number of parts and constructed of parts that can be actuated more smoothly and with less effort, and to provide a position feel assembly in addition to the main detent assembly.

Re clm 2, Reasoner discloses that the detent profile includes a plurality of grooves (see Figure 2, spherical recesses 76).

Re clm 3, the actuator (72) is a linear actuator having a pin (74 is a pin) extendable along a linear path.

Re clm 5, the pin (90) is in an extended position when said actuator (56) is energized and a retracted position when said actuator is unenergized (see paragraph 0033).

Re clm 6, the pin is in an extended position when the pawl (74) is in the unlocked position and a retracted position when the pawl (74) is in the locking position (the pin/pawl moves into the groove to lock and out of the groove to unlock).

Re clm 7, Reasoner in view of Osborn discloses the roller (Osborn 43) is rotatably secured to a detent lever (Reasoner pin/pawl 74 is a lever) and the detent lever is pivotable to move the pawl between the locking position and the unlocking position.

Re clms 8 and 9, Reasoner in view Osborn discloses that the pawl (Osborn 42) moves along an arcuate path between the locking position and the unlocking position {clms 8 and 9} and the actuator (Reasoner 72) is a linear actuator which is operatively connected to the detent lever to pivot the detent lever along the arcuate path {clm 8}.

NOTE: a pivot as defined by Webster's II New Riverside Dictionary as something on which the direction, development or effect on something else depends.

Re clm 4, Reasoner in view of Osborn discloses all the structural limitations as applied to claim 3 above.

Reasoner in view of Osborn, as applied above, does not disclose that the actuator is a solenoid.

Reasoner teaches using a solenoid (78) with another pawl arrangement (54) for the purpose of providing a means for preventing the pawl from being moved out of position unless the brake pedal is depressed (C3/L2-5).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the teachings of Reasoner in view of Osborn and make the actuator (72) a solenoid, as taught by Reasoner, for the purpose of providing a means for preventing the pawl from being moved out of position.

3. Claims 10-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reasoner et al, USP 6,230,579, in view of Kataumi, USP 5,445,046 and further in view of Osborn, USP 5,277,077.

Re clm 10, Reasoner discloses a shifter mechanism comprising, in combination:

- A shifter lever (42) movable along a shift path
- a detent profile (on detent plate 70) defining a plurality of gear positions (Figure 2 recesses 76)
- A pawl (74) movable between a locking position wherein the pawl engages the detent profile to lock the shifter lever in one of the plurality of gear positions against movement along the shift path and an unlocking position wherein the shifter lever is movable along the shift path between the plurality of gear positions

- A pivotable detent lever (the middle portion of pawl 74 is a lever) carrying the pawl
- A linear actuator (56) operatively coupled to the pawl (54) to selectively move the pawl (54)

Reasoner does not disclose that the pawl moves in an arcuate path.

Kataumi teaches a pawl (30) that is moved by an actuator (spring) in an arcuate path for the purpose of engaging a plurality of detent teeth in a releaseable manner (C1/L36-54).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the teachings of Reasoner and provide a pawl (30) that is moved by an actuator in an arcuate path, as taught by Kataumi, for the purpose of engaging a plurality of detent teeth in a releaseable manner.

Reasoner in view of Kataumi does not disclose a secondary detent profile defining a plurality of gear positions, an engagement head contacting the secondary detent profile, and a spring member resiliently maintaining the engagement head in contact with the secondary detent profile as the shifter moves.

Osborn teaches a secondary detent profile (41) defining a plurality of gear positions, an engagement head (43) contacting the secondary detent profile (41), and a spring member (42) resiliently maintaining the engagement head in contact with the profile (41) for the purpose of providing an additional detent member (in addition to 30) which provides a position feel for the user.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the teachings of Reasoner in view of Osborn and provide a secondary detent profile defining a plurality of gear positions, an engagement head contacting the secondary detent profile, and a spring member resiliently maintaining the engagement head in contact with the secondary detent profile as the shifter moves, as taught by Osborn, for the purpose of providing a position feel assembly in addition to the main detent assembly.

Re clm 11, Reasoner discloses that the detent profile includes a plurality of grooves (see Figure 2).

Re clm 12, the actuator (72) is a linear actuator having a pin (shaft of 74) extendable along a linear path.

Re clm 14, the pin (90) is in an extended position when said actuator (56) is energized and a retracted position when said actuator is unenergized (see paragraph 0033).

Re clm 15, the pin is in an extended position when the pawl (54) is in the unlocked position and a retracted position when the pawl (54) is in the locking position (see Figures 5 and 6).

Re clm 16, Reasoner in view of Kataumi and Osborn discloses all of the claimed subject matter above.

Reasoner in view of Kataumi and Osborn as applied above does not disclose that the pawl includes a roller that engages the detent profile.

Osborn teaches a pawl (42) that includes a roller (43) that engages the detent profile for the purpose of providing a shift lever handle assembly having a limited number of parts and constructed of parts that can be actuated more smoothly and with less effort (C2/L30-35).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the teachings of Reasoner in view of Kataumi and provide a pawl that includes a roller that engages the detent profile, as taught by Osborn for the purpose of providing a shift lever handle assembly having a limited number of parts and constructed of parts that can be actuated more smoothly and with less effort.

Re clm 17, Osborn discloses that the roller (43) is rotatably secured to the detent lever (40).

Re clm 13, Reasoner in view Kataumi and Osborn discloses all the structural limitations as applied to claim 12 above.

Reasoner in view of Kataumi and Osborn, as applied above, does not disclose that the actuator is a solenoid.

Reasoner teaches using a solenoid (78) with another pawl arrangement (54) for the purpose of providing a means for preventing the pawl from being moved out of position unless the brake pedal is depressed (C3/L2-5).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the teachings of Reasoner in view of Kataumi and Osborn and

make the actuator (72) a solenoid, as taught by Reasoner, for the purpose of providing a means for preventing the pawl from being moved out of position.

***Allowable Subject Matter***

4. Claims 18-20 are allowed.

***Response to Arguments***

5. Applicant's arguments with respect to claim 1-17 have been considered but are moot in view of the new ground(s) of rejection (references being applied differently).

The Applicant is arguing the newly added language. The Examiner notes that this new language does not provide any structural relationship between the lever and the secondary detent which renders it a broad limitation. In addition the Applicant has removed a limitation from line 3 of claim 1 and 10 which further broadens the claims.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Pilkington whose telephone number is (571) 272-5052. The examiner can normally be reached on Monday-Friday 8:00AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. P./

Examiner, Art Unit 3682

1/23/08

/Richard Ridley/

Primary Examiner, Art Unit 3682

